194 whispered vowels may be neutralized to ĭ, or elided. In the latter case its length may
[192] be retained in a pulse. When a long vowel loses its accent, or when a following voiceless vowel becomes voiced, it often loses a mora; e.g., pu·kU *horse*, navukuwá·ʔ *automobile* (without its horse); tĭcipOsaʔ or tĭcipĭsaʔ *nut, bolt, screw*.

Only voiced vowels occur in clusters. The
[192] following have been noted: ia, ïa, ïe, ïi, ai, oa, ua, ui, and ue. Examples are: pia- *big*; mïa *moon*; tïe- *little*; ʔïvïïʔ *mole*; haicI *friend*; coapĭ *shoulder*; suavE *cross*; pui *eye*; wihtue *bucket* (objective). -aʔe-, -oʔi-, and -uʔe- are frequently pronounced as clusters in rapid speech; e.g., noʔi *egg* becomes noinĭ· *eggs*.

Stress most frequently falls on the first
[104] syllable. When it does it will not be marked in this paper. An apparent exception to the rule that stress tends to fall on one of the first three syllables of a word is to be found in a long list of names of plants and animals and a few inanimate objects.[13] These words are polysyllabic and end with a stressed long vowel plus ʔ. By analogy the names of many new traits are fitted into this pattern.
[192] Examples are: pohkó·ʔ *burrowing owl*; ʔaʔahká·ʔ *banana*; waʔrokiyá·ʔ *pliers* or *crayfish*. A secondary stress may occur on the first syllable of both these and other long words.

Subject to the qualifications noted above in discussing the distribution of various phonemes, the syllabic pattern is the sequence CV or CVC. The vowel may be
[196] long, short, whispered, or a cluster. Other prosodic features such as tone or phrase and sentence melody, except for a few expletives, seem to be only idiosyncratically meaningful.

193 **3.3. Prefixation** even including prefixed clitics, while of less importance morphologically in Comanche than suffixation, is highly productive of neologisms and bulks large in the acculturation vocabulary.

[13] William S. Smalley, Phonemic Rhythm in Comanche, IJAL 19.297-301 (1953).

[p. 147-B]

193 196 **Derivational prefixes** include a set of instrumentals, a reflexive, na-, and an intransitivizer, tī-.

Instrumentals are: pi?-[39] *with the buttocks, behind, or referring to the buttocks or rear* (similarly for the others); ta?- *with the foot or leg*; to?- *with the fist, or violent movement of the hands, also with the hoof*; kī?- *with the teeth, or scissors* (extended meaning); ku?- *by heat*; ca?- *by force, usually with the hands; direction towards the body or upwards*; ci?- *with a pointed object (knife, penis, stick), direction away from the body*; co?- *with the head*; ma?- *with the hand, pertaining to the hand*; mu?- *with the nose or mouth*; sī?- *with the feet, by paddling*; wī?- *with the body, movement sideways*; ki?- *with the elbow*; hu?- *with the back*.

Examples: mu?nua?, *hog*, (mu?- + nua? *move*); ma?nua? *checkers, chess, dominoes*; tahpu·nI *to test with the foot*, or *to try on shoes*, (tah- plus pu·nI *to see*), similarly, kīhpu·nI *taste*, and for the others.

The prefix, na-, when reduplicated, has reciprocal meaning: navuni? *mirror* (na- plus pu·nI *to see*, plus -?, nominalizer); nanavuni? *window* (*to see each other*). With either reflexive force or meaning *part of, its*, na- is commonly affixed to words for parts of a saddle, automobile, wagon, etc.:[40] navukuwá·?a/nakhnI *auto body* (*auto's house*), navukuwá·?a/nava· *gasoline* (*auto's water*), navukuwá·?a/na?o·mO *wheel* (*auto's leg*), navukuwá·?a/narhoveno·kī? *brake* (*auto's loaded on the hind legs*).

The prefix tī- seems affixed to verbal stems or roots, with or without a subjectivizer, to intransitivize a verb or to make the meaning more general: tīnua? *broom* (tī- plus nua? *to move*); tīma?cune? *file* (tī- plus ma?cune? *to rub with the hand*).

194 [39] h may alternate with ? for these instrumentals.

197 113 [40] Similarly for Pima, George Hersog, Culture Change and Language: Shifts in the Pima Vocabulary, in Language, Culture and Personality; Essays in Memory of Edward Sapir, pp. 66-74, (p. 68) (Menasha, Wisconsin, 1941).

[p. 118-A]

193 **3.4.** Infixation, if indeed it may be so
194 interpreted, is the least productive form of
affixation. In an arbitrary class of stems the
193 infix, -V-, indicating the morphophonemic
194 lengthening of a vowel, signifies the im-
196 perative;[11] e.g., hivi·pĭ *drunkard*, hi·vI
drink!; cihima *to pick up with a stick* and
cihi·mA, imperative form. But the follow-
ing imperative forms also occur: nohi? *toy*
and nohI *play!*; kupita? *flashlight* and
kupItA *light the fire!*. The singular imperative
is phonetically the most economical form a
root can take. All the above examples can
also be interpreted as the phonetically
mechanical results of an inflectional verbal
suffix, -minus V (voicing of final vowel),
used to indicate the imperative.

193 **3.5.** Suffixation is the most productive
[196] form of affixation. Derivational suffixes
include the nominalizers, -pĭ and -?, which
make nouns of verbal roots. These forms are
193 highly productive of new word formations
192 in Comanche and figure importantly in the
names of new cultural acquisitions: tĭhka
eat plus -? gives tĭhka? *fork*; nohko *bake*
plus -pĭ gives nohkopĭ *bread, baked goods.*

[196] There is also a series of derivational
classificatory suffixes which make nouns of
bound qualitative roots: hu·- *wood, tree* +
-pI gives hu·pI *tree*; mu·- *nose* + -pI gives
mu·pI *nose*; pia- *big* + -pĭ gives piapĭ
big one; ?eka- *red* + -vI(tĭ) gives ?ekavItĭ
red one; yĭva·- *autumn* + -cI(?) gives yĭva·
ci? *autumn grapes*. That these are deri-
vational is shown by the fact that they are
lost when combining with other stems; e.g.,
hu·ku·nA *matches* (*wood fire*); ?ekhsa·? *dye*
(*red boiled*).

193 Inflectional suffixes may be either verbal
196 or nominal. They are numerous and convey

[113] [11] Henry Osborn and William A. Smalley, For-
mulae for Comanche Stem Formation, IJAL 15.
93–9, p. 94 (1949). The treatment of Comanche
morphology in this paper, while approached dif-
ferently, owes much to this pioneer statement. See
also D. B. Shimkin, Shoshone II: Morpheme List,
IJAL, 15.203–12 (1949), for a sketch of the closely
related Shoshone language.

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193 a wide range of meaning. All verbal in-
196 flections are formed by suffixation. Among
those productive of new words are: -kī
193 *benefactive or causative*; navi?aikī? *rocking-*
chair (na- *reflexive* + pi?- *with the buttocks*
196 + ?ai *go, lope* + -kī + -? *nominalizer*).
192 -?e *habitual*; nĭmivó·?e·tĬ *camera* (nĭmĭ- *1st*
per. plural + -i *objectifier* + po· *draw* +
-?e + -V *plural* + -tĬ *nominalizer*). Other
193 verbal suffixes indicate mode, tense and
196 aspect. The following are rather tentative
examples: -ma *completive*; -kwa *motion*
away; -?tu?ĭ *future* (*in positive statements*);
-wa?ĭ *future* (*in negative statements*); -?ĭ
past, semelfactive; -yU *past, durative* (?);
-nA *continuative* (?); -kI *imperative, plural*;
-yu *verbalizer, with substantive stems*; -hr (?).

Nominal inflectional suffixes convey such things as number, case (objective, subjective genitive), and nominalization: -tī *nominalizer*; -nĭ· *plural*; -V *plural*; -?a *genitive*; -kwĬ *dual*; -hī *dual* (*on proclitic pronominals*); -ha *objective*; -hta *objective*; -i *objective*.

193 **3.6.** Enclisis: Morphologically enclisis may be considered as a special type of
[194] affixation. Clitics are phonologically bound to words, normally unstressed, and, although they stand after any inflection on the stem (enclitic position), they may themselves be inflected (proclitic position). Clitics may be either bound, that is appended to a stem and never uttered in iso-
[196] lation, or free. Examples of bound clitics are: -ca? *declarative*; huhcu·ca?/toyava?aiki/ yĭcĭ?I *that bird flew over the mountain* (huhcu· *bird* + -ca?); -se? *narrative* (in myths and stories); -ha? *interrogative*; -ci? or -ĭ? *diminutive*, etc. Free clitics may function morphologically as either clitics
193 or as stems (see below). Prepositional,
196 locative, pronominal, numerative, demonstrative, and other notions are expressed by clitics.

3.7. A paradigm of pronominal and demonstrative affixes which function as clitics is given below:

[p. 149-A]

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Person		*Singular*		*Dual*	*Plural*
1st	possessive or objective	nI-	exclusive	nihI- -nikwI	nimI- -niI
	subjective	-nI?	inclusive	tahI- -takwI, or -tah	-ta-, or -tamI-
2nd		?I- -inI		mihI- -mikwI	-mI-
3rd	visible	tsa- -ma?	emphatic	marhI- -marikwI	-marI-
	invisible	?u- -?u?	· or -su(?)-	?urhI- -urikwI	-?urI-
	close	?i- -?i?	or -si(?)-	?ithI- -itikwI	-?itI-
	distant	?o- -?o?	or -so(?)-	?orhI- -orikwI	-?orI-
	very own	pI-,	or -sI- (medially)	pI-, or -sI-	pI-, or-sI-

Duality is expressed by the nominal suffixes, -hī and kwĬ, for the 1st and 2nd persons: pīhīkanikĬ?urīkwĬ *they* (dual, invisible) *are at their own house* (pī- + -hī + kahnI *house* + kĬ *at, in* + ?urī + -kwĬ). For the 3rd person demonstratives duality seems to be expressed by an infixed h; however it is probably the result of reduction and assimilation: ?u-, 3rd person invisible, plus -tī, nominalizer, plus -hī, dual, gives ?ur(ī)hī. Inflection for plurality, except for the 1st person exclusive, is accomplished with the pluralizer, -V.

As proclitics these affixes function as possessives, or, plus an inflectional suffix, -i, in the non-singular, as objectives. If any word precedes the verb in the sentence, the pronoun subject is generally enclitic to that word. In clitic form they are unstressed. In objective pronominals, where the suffix -i is added, phonetic assimilation may occur: mihī- + -i + pu·ni *see* + -nī? gives mīhivúninī? *I see you two.* Assimilation and reduction with -i also occurs in other stems; sonipĬnī· *grass* + -i gives sonipĬni· *grass* (obj.).

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When inflected with nominal suffixes these pronominal forms may stand as free stressed words: nī- + -nī, plural, gives nīnĬ *we* (*exclusive*). Both demonstratives and non-demonstratives may cluster with other clitics to constitute a free stressed word: nī?u? *it is I*; ?onai *from there*; ?inai *from*

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[p. 149-B]

193 *here*; ?inakwĭ?u? *it is on this side* (?i- + nakwĭ *side, direction* + ?u?).

[196] 3.8. Compounding is a morphological process defined as the juxtaposition of roots and/or stems to form new stems. These new compound stems may be inflected or stand as free words. Compounds may be composed of from two to four roots: ?ekahpa· *soda water* (red plus water); tu·ku·nA *coal* (black plus fire); pawovivu·kU *boat* (water plus board plus horse); piaro-sawoviknI *big white wooden house*. Examples of compounds composed of root plus stem are: wanaciya·? *flag* (wana- *cloth* + ci- *with a stick*, an instrumental prefix + ya· *hold up* + -? *nominalizer*); pihna·nohkopĭ *cake, cookies* (pihna· *sweet* + nohko *bake* + -pĭ *nominalizer*).

193 Among the most productive of compounded acculturation terms are a series of qualitative roots or stems (see the discussion of stem types below). These invariably

[128] precede noun stems in a compound. They are grouped below according to their syntactic position relative to each other:

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pia-	*big*
pĭe-	*old, former*
tĭe-	*little*
ke-	*negative*

II

?isa-	*false, deceitful*
hu·-	*wood*
ca·-	*good, fine*
so·-	*many*
yu·-	*common, ordinary*

III

?eka-	*red*
?evi-	*blue, green*
?esi-	*grey, dull*
?eso-	*light in color*
?oha-	*yellow*
?otĭ-	*brown*
tu-	*black*
tosa-	*white*

193 Bound particle stems also function in
196 compounding:

-wahtĬ *without* (-wah + -tĬ, nominalizer), noyowahtĬ *without testicles*—a personal name; navukuwá·ʔ *automobile* (na-, reflexive + pu·kU *horse* + -wahtĬ *without*. The ending presumably represents reduction to a syllabic pattern common for many plant and animal names—see 3.2.).

-katĬ *possessor of* (-ka + -tĬ, nominalizer), puhakatĬ *medicine-man* (puha *supernatural power* + -katĬ). Both of the above are commonly used in personal and animal names.

193 **3.9.** Reduplication, a very important
196 technique in many Uto-Aztecan languages such as Pima, seems in Comanche to be restricted to the inflection for the dual and plural forms of qualitative stems and a limited group of kinship and status terms. There are several patterns of reduplication: $C_1V_1C_2$ becomes $C_1V_1C_1V_1C_2$ or $C_1V_1hC_1V_1C_2$: ʔekavI- *red*, becomes ʔeʔekavItĭ·caʔ *the red one*; and tĭta·tĬ *little one*, becomes tĭhtĭta··tĭnĭ· *little ones*. $C_1V_1V_2C_2V_3$ becomes $C_1V_1C_1V_1V_2C_2V_3$; ca·tietĬ *favorite child*, becomes ca·tĭrietĭnĭ· *favorite children*, and piava· *lake*, becomes piviava·nĭ· *lakes*. And $C_1V_1hC_2$ apparently becomes $C_1V_1hC_1V_1hC_2$; tahkaʔ *sibling*, becomes tahtahkáni *siblings*.

It also seems possible that reduplication may be used with certain verb stems to convey an iterative meaning: ʔekayĭyĭkaʔ *jelly, jam, jello* (ʔeka- *red* + yĭka *to shake* (?) + -ʔ, nominalizer).

193 A somewhat anomalous form occurs in
196 some ejaculations ʔĭrĭrĭrĭ·ĭ· *I'm*, or *it's so*
195 *hot!*. Reduplication also figures importantly in the rather extensive vocabulary of baby words:[a] papá·ʔ *water*; pepé·ʔ *ball*; and tatá·ʔ *food*.

193 **3.10.** A number of stem classes may be distinguished according to their distribution in relation to affixes and other stems, and, to a limited degree, by their meaning.

[a] Joseph B. Casagrande, Comanche Baby Language, I JAL 14.11-4 (1948).

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193 The major stem classes and some of their characteristics follow:

Verb stems (appear with a series of verbal inflectional suffixes).

Noun stems (appear with a series of nominal inflectional suffixes; may stand as uninflected words).

Qualitative stems (reduplicated for non-singular; before classificatory derivational suffixes which are lost in composition; before the verbalizing suffix, -yu; and precede verbal or nominal stems in compounds).

Clitic stems, including pronominal stems (may combine with demonstrative and non-demonstrative pronouns to constitute a free form with one stress: nī?u? *it is I*; ?inakwī?u? *it is on this side* [?i-, 3rd per. sing. close, plus nakwǐ, *direction, side*, + -?u?, 3rd per. sing. invisible); ?ikǐsi? *it is right here* (?i- + kǐ *in or at* + -si?, 3rd per. emphatic]).

3.11. Words have as a rule only one major stress, but may also be recognized by their morphological context and speech pause. They may be either particles or inflected or free roots and stems. Words may also be classed according to their syntactic

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193 position, and, if inflected, partially by their final affix, as verbs, nouns, verbal nouns, and particles. Verbs may take subject or object, but may not be subject or object. Nouns may be subject or object, and they may also take a subject. Verbal nouns may be subject or object and may take subject and object. Particles may not be or take subjects or objects: hą· *yes*; ʔaná· *ouch*!, etc.

3.12. Comanche makes good use of sentence-words which may or may not include a verbal stem: nanapɪ̈wahtī·nī? *I am shoeless* (nanapɪ̈ *shoe* + -wahtī *without* + -V, plural + nī?, 1st per. sing. subject); sïmïma? *it is one*, (sï·mɪ̈ *one*, plus ma?); miaruʔinī? *I will leave* (mia *go* + -tuʔI, future + -nī?). Descriptive phrases conveying a unit meaning are also common and are important in naming the new: mïaca?/ rïyaipɪ̈ (*it is an*) *eclipse* (mïa *moon* + -ca?, declarative, and tïyaipɪ̈ *dead*).

The basic word order seems to be subject, object, verb. This pattern can, of course, be greatly amplified by the parenthetical apposition of additional words.[43]

[43] For examples see Henry Osborn and William A. Smalley, Formulae for Comanche Stem Formation, IJAL 15.93–9, p. 98–9 (1949).

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[pp. 152-216 not processed]

192 *ten, as clothes*; cohpE *pillow* (*headrest, head of bed*); *co·mO *beads* (*bone beads*); savahpaki? *drum* (*drum* [Detrich gives waw vee wihk to ow, woviwihtua *wood bucket*]); sanahpĭ *glue, paste* (*pitch*); sanahkó·?[44] *chewing-gum* (slippery elm bark which was chewed); *sohovokó·? *fig* (*cottonwood fruit*); *suavE *cross, crucifix* (*cross*); suapĭ *soul* (*thought?*);[45] suthai- *bless* (*pity*); hivihkatĭ, hivipĭ *drunk* (hi·vI *drink!* [this could also be interpreted as loan-translation]); hĭ·kI *awning, umbrella* (*shade*); maniha- *to read, make a fixed speech* (*name something*); na?sihpé·? *ball, baseball* (*gourd* [na? *it's* + *fallen from the cold*]); *nakucI *gunpowder* (*powder*); *nacu?U *medicine* (*medicine*); *nĭ·tipĭka? *button* (*tipi lacing-pin*); nĭ·tĭvu?ipĭ *button-hole* (*slits for lacing tipi*); *nohi? *toy, game* (*toy* [nohi *play*]); *wa?ihpĭkwasu? *woman's dress*; wahka?e·tĭ *running, galloping* (said of herd of horses, buffalo, merry-go-round, machine, motor, etc.); % *wanapĭ *cloth* (*bark*); wa?rohkĭyá·? *pincers, tongs* (*crawfish* [shellfish, + carry in the mouth]); *wihI *knife* (*flint knife*); wĭ?aikĭ- *to crank a car, turn a grindstone, roll a hoop, wind something up;* formerly to make a horse lope by whipping or urging it. (wĭ?- *instrumental* + ?ni *go* + -kĭ *causative*); wihivi? *cup* (old word) (wĭ- + hivi- *drink* + -?, nominalizer); wĭnomenA *move hips back and forth as in copulation;* now *dance, hula,* etc; wokorai? *scrape* (*painted bunting, (bird)* [woko- *pine* + tai *spot*]); yokapĭ *oyster* (mucous, spittle); *yuhU *oil, grease, lard* (*fat*).

192 In order to distinguish the old trait from
193 the new the modifiers taivo·-[46] *White man's,*
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[44] Julian H. Steward, Culture Element Distributions: XIII, Nevada Shoshone, Anthropological Records, 4: 2, p. 332 (University of California, 1941) gives pitch for sanako.

[45] Julian H. Steward, Culture Element Distributions: XIII, Nevada Shoshone, Anthropological Records, 4: 2, p. 261 (University of California, 1941) gives *breath* as the meaning of this word in Shoshone.

[46] Albert Gallatin, A Synopsis of the Indian Tribes North of Mexico, Trans. & Coll. of the

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and nīmī- *Indians'* or *ours*, are often prefixed to a word whose meaning has been extended.[47] The use of the modifier is optional to some extent, depending upon contexts where ambiguity might arise; but they often tend to become fixed and integral parts of the word. In many of the following examples the unmodified word refers primarily to the new trait and the modifier is necessary when the old trait is to be specified. These examples indicate the extent to which new traits have superseded their native counterparts:

?a?ahká·? *banana* (Detrich gives tab ak see); nīmī?a?ahká·? *devil's claw*, a plant bearing a crescent-shaped seed-pod which turns brown and then black and yields edible black seeds. (From ?a· *horn*, katĭ *got*). ?amawó·? *apple*; nīmī?amawó·? *red-haw* (tĭrĭe- *little* [redupl.] may also be used instead of nīmī-). *tisaaI *perfume*; nīmīrisaaI *a native perfume made from a plant.* *kahnI *house;* *nīmīkahnI[48] *tipi.* konO *cradle;* also now, *coffin;* nīmīkonO *cradle-board.* ⅋ kuhcU[49] *cattle* (*pimoro·?, however, is more common);

Amer. Antiquarian Society, Vol. II, (Cambridge, Massachusetts; 1836), gives tabbeboo for White man.

[113]

[47] Gosiute, a language closely related to Comanche, uses taibo, the cognate of Comanche taivo·, in the same way; Ralph V. Chamberlain, Animal Names and Anatomical Terms of the Gosiute Indians, Proceedings of the Academy of Natural Sciences of Philadelphia, 60: 74-103 (1908). The use of a modifying element to distinguish the old from the new is widespread in North American Indian languages. See Albert S. Gatschet, 'Real', 'true', or 'genuine' in Indian Languages, AA o.s., 19: 391-403 (1896); John P. Harrington, Vocabulary of the Kiowa Language, BAE Bulletin 84 (Washington, D. C.; 1928); and D. D. Lee, The Linguistic Aspects of Wintu· Acculturation, AA 45: 435-440, p. 436 (1943).

[48] Julian H. Steward, Culture Element Distributions: XXIII, Northern and Gosiute Shoshone, Anthropological Records, 8: 3, p. 365 (University of California, 1943), gives this for the Lemhi Shoshone.

[49] Albert Gallatin, A Synopsis of the Indian Tribes North of Mexico, Trans. & Coll. of the Amer. Antiquarian Society, Vol. II (Cambridge, Massachusetts; 1836), gives kotso for bison.

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192 sources of the latter type in English.[11]
197 These fashions are foreign to Comanche; however a pattern for onomatopoetic formations seems to exist (e.g., wo?woki- *bark*; tī?ī· *killdeer*; civivī· *chickadee*), and the language has added a small number of these forms to its relatively limited number of roots: *ta?wo?i? *gun, rifle* (doubtful); koka? *guinea fowl*; ko·ko? *chicken*; *ko·korā?a·? *rooster, chicken*; *wa?o·[11] *cat*.

New analyzable words, on the other hand, are exceedingly abundant in Comanche. These are usually descriptive of the new traits, or embody some observation or attitude towards them. While the analysis of most words is quite transparent, this was not always immediately apparent to the native speaker himself who often evinced surprise at realizing the etymology of a word he had never thought about in these terms before.

193 The presence of the set of instrumental prefixes and the pattern of their frequent use
197 has led to the description of many new items,
192 and especially machines and implements, in dynamic terms rather than in static ones of color, shape, and size. Further, the formation of words by incremental affixation
[193] allows a considerable degree of subtlety and accuracy of description which is succinctly expressed in many of the new coinages:[11] pocahto?i? *pump (raise water forcefully with the hands)* [pa- *water* + cah- instrumental + to?i *rise, go up* + -?, nominalizer]; ku?mito?ai? *pop-corn (turned inside out by heat)* [ku?- *by heat* + mito- *inside out* + ?ai *go* + -?, nominalizer]; nara?aikī? *bicycle (make one's self go with the feet)* [na-, reflexive + ta?- *with the feet* + ?ai *go* + -kī, causative + -?, nominalizer];

[113] [11] E. H. Sturtevant, An Introduction to Linguistic Science, pp. 120 ff., and 127 ff. (New Haven, Connecticut; 1947).

[11] Robert G. Latham, Elements of Comparative Philology (London; 1862), says that there was then no word for cat.

[128] [11] In these and the following examples the literal translation is enclosed in parentheses, and the analysis, where given, is in square brackets.

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121 done the same as in alumnus, -i, -a, -æ.
197 Comanche, however, has borrowed only
192 one bare form of the word. Thus, ten cents
193 is used in plural forms which would not be permissible in English. It must also be remembered that the linguistic models presented to the Comanche were from colloquial and not literary sources. The loans, "two bits" and "six bits" are straight from the vernacular. Similarly, Southern Paiute has taken the slang terms "nigger" for Negro and "taters" for potatoes into the language.[106]

Loanwords have frequently been used in creating new compounds or descriptive words in Comanche. It may be assumed in most cases that the loanwords antedate the new compounds in the language. One of several synonyms for *pig*, muvipo?ro? *nose* + *pig* (Spanish), is an example. One notes a degree of redundancy here which may, in fact, indicate that the Comanche are unmindful of the Spanish meaning and
192 origin of po?ro?. The following is a representative list of new compounds which incorporate loanwords:

From Spanish: ?ekahcí·ra? *red pepper;* ?evihpihu·ra? *greenbeans;* ?evimú·ra?ya?ke? *frog* (*green mule crier*); *?otihtohtíya? *ginger snaps, cookie* (*brown bread*); pehekatïpa·nï *rye bread* (pehE *seed* + -katï *possessor of* + pa·nï); *tosarohtiya? *crackers* (*white bread*); *ku-simu·ra? *donkey* (*grey mule*).

From English: kunawaikin[107] *train; locomotive; railroad* (*fire wagon*); ci·sïsa pía *Mary* (*Jesus' mother*); *ho·karoho·vE *ham*

Nahuatl, Todd Memorial Volumes: Philological Studies, Vol. I, (New York, 1930).

[106] Edward Sapir, Southern Paiute Dictionary, Proc. of the Amer. Academy of Arts and Sciences, 65: 537-730, pp. 584 and 683 (Philadelphia, Pa.; 1931).

[107] Charles Detrich, Comanche Vocabulary Collected at Fort Sill, Oklahoma, manuscript on file at BAE (1895), gives koón-ah-wah-wee-poke-o-póy, kúna-wovivuku?apú?E *fire wooden horse's road* for railroad. He also notes táw hawv, toho·vE *hindquarters* for ham.

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192 197 [601] the custom, although he has been unable to locate a similar word in another tribe.

The Comanche word for *corn*, *hani·vI,[103] is another word of doubtful origin. It is unanalyzable and could either be borrowed or an extension of an older word whose original meaning is lost. The Pima word hu·nI[104] *corn*, appears to be related. If so, the direction of diffusion would presumably be from Pima to Comanche. There are apparently no cognate forms in the more closely related Shoshonean and Southern Paiute languages.[104]

192 197 193 Comanche loanwords are treated as native stems and are subjected to the regular morphological processes with little or no recognition of the fact that they are loanwords. As an example we might cite the following forms of tehnsé·?, from English *ten cents:* tehnsé?nĭ· *plural;* tehnsé?ma? *it is ten cents;* tehnsé?wahtĬ *without ten cents;* tetehnsé·? *ten cents each;* tehnsé·kU *add, raise ten cents* (in gambling); tehnse·vetĬ *to the amount of ten cents;* tehnsé·matĬ *part of ten cents;* tehnsé·matima? tĭmĭ· *spend part of ten cents;* tehnsé·ma?ai? *together with ten cents;* nĭrehnsé·? *my ten cents;* tehnsé·nĭhW *two dimes.*

121 Occasionally loanwords may be adopted in several of their proper grammatical forms. Nahuatl has absorbed a fairly large number of Spanish nouns in both their singular and plural forms.[105] English has

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[103] Randolph B. Marcy, Exploration of the Red River of Louisiana in the year 1851, 32d Congress, 2d Session, (Washington, D. C.; 1853), records hah-ne-be-tah, possibly hani·vItĬ, *for corn.*

[104] George Herzog, Personal Communication.

[104] Edward Sapir, Southern Paiute Dictionary, Proc. of the Amer. Academy of Arts and Sciences, 65: 537-730, p. 559 (Philadelphia, Pa.; 1931), gives ?I?á-pI *what is planted,* for corn in Southern Paiute; also on p. 641, qom·i', an older word is listed. Ralph V. Chamberlain, Animal Names and Anatomical Terms of the Gosiute Indians, Proceedings of the Academy of Natural Sciences of Philadelphia, 60: 74-103, p. 374 (1908), notes komu for corn in Gosiute. This is a loanword from English.

[105] Franz Boas, Spanish Elements in Modern

[p. 231-B]

15: Osborn & Smalley L-5 (1948) 1965 NO6 Comanche NO6
Oklahoma

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FORMULAE FOR COMANCHE STEM AND WORD FORMATION

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0. Introduction
1. Affix check list
2. Stem formation
3. Stem classes
4. Word formation

128 0. In this paper we discuss Comanche stem and word formation. The formulae utilized to represent the observed constructions grew out of an attempt to handle the cross-cleavage between stem classes and word classes. Although not all possible combinations of formational and inflectional elements have been found, this method of statement by formulae can be expanded to include any new combinations recorded.

● 193 Stem classes are characterized by their potential distribution with alternants of suffix 311, but are not identifiable by any feature of internal structure. Word classes are characterized by their potential syntactic distribution, and when inflected are identified morphologically by their final suffix (see 4).

193 128 1. Affix check list.[2] The following list is representative of the most commonly used

[101] [115] [128] [1] Data for this paper were gathered in the 1948 session of the Summer Institute of Linguistics at the University of Oklahoma. Comanche informants from Walters, Oklahoma, were Molly Weryavah, Helen Seahmer, and Emily Riddles. We are indebted to the staff of the Institute, particularly to Elliott Canonge and John B. McIntosh for technical information on Comanche, and to William L. Wonderly for advice in the presentation of the material.

[194] [104] [2] The phonemes of Comanche are analyzed as follows: p, t, k, kʷ, ʔ; c; ʁ, s, h; m, n, r; w, y; i, I, e, E; ɨ, Ɨ, a, A; u, U, o, O. Large caps represent voiceless vowels; small cap B represents bilabial v. Stress /'/ is written immediately preceding the stressed syllable. Hyphen (-) represents morpho-

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affixes in Comanche. Some classes of affixes are not exhaustive (e.g. derivational affixes, class 100, which includes many more morphemes), but the pertinent classes for stem and word formation are represented.

Classification of affixes by centuries is as follows: 100 derivational, 200 verbal inflectional, 300 nominal inflectional. Classification by decades is generally on the basis of relative order. However, morphemes 201, 253, 254, 323 have been classified otherwise for convenience of description since their relative order is not as pertinent as their identity with the group in which they are placed. Decimal numbers indicate mor-

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[104]
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logical juncture where clitic stems are bound to other stems or words (see **3.1.3., 3.1.4., 3.3.**).

The recurrent morphophonemic changes are as follows: (1) Single morpheme-final vowels generally become voiceless in utterance-final position. 'kahniI *houses* > 'kahnI *house*.

(2) In certain combinations morpheme-final vowels reduce to open transition of neutral vowel quality. In certain combinations morphemes reduce medially by the loss of one or more morae. Compare 'tihka *eat* in the following: 'tihkaru?i-nI? *I will eat*, 'tikᵊnīnitu?i-nI? *I will always be eating* (['tikᵏnīnitu?i-nI?] in which [kᵏ] is approximately [ki] but without vowel mora); 'puukU *horse* + 'kahnI *house* > 'pukuknI ['pukukᵏNI] *barn*.

(3) t interchanges with r; and p interchanges with n, utterance medially at morpheme boundaries under conditions not always phonologically determined. 'pani? *older brother*, nI-'nani? *my older brother*; 'tInoorI-ma? *he is writing*, 'caa-nI? 'rInoorI *I write well*. After pause the p and t always occur: 'tenahpI?a 'rInikᵊIri-nI? 'nuni? *I see the man singing*, but 'tenahpI?a / 'tInikᵊIri-nI? / 'puni? (in which / indicates tentative pause). t (but not p) always occurs after i. '?itI *this one* < ?i 3rd person close + -tI nominalizer; '?orI *that one* < ?o 3rd person distant + -tI; 'pianapIrII *large ones* <'piapI *big*.

(4) ? + ? = ?. 'sarii? *dog* + -?a genitive > 'sarii?a *dog's*.

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193 128 **pheme alternants.** Distribution classes of stems and affixes are defined below.

Reference to affix classes is made in even century and/or decade numbers (e.g. reference to tense is made by 260). Reference to specific morphemes is made by the list number (e.g. reference to -tu?i future, is made by 261). The distribution of alternants in respect to each other is indicated in the list.

193 Class 100: 110, 120 1st and 2nd order derivational prefixes respectively; 130 derivational suffixes.

111. ca?-[3] *with an upward movement of the hand*
112. ma?- *pertaining to the hand*
113. ro?- *with a violent movement of the hand*
114. co?- *with the head*
115. ki?- *with the elbow*
116. hu?- *with the back*
117. ta?- *with the leg or foot*
118. kĭ?- *with the mouth or scissors*
119. ci?- *with something sharp*

121. na- reflexive

131. -pĭ nominalizer
132. -? nominalizer
133. -pI[4] classificatory affix
134. -pI? classificatory affix
135. -nI classificatory affix
136. -ci? classificatory affix

Class 200: 201 infix; 210–250 verbal suffixes in relative order by decades.

201. -V-[5] imperative → (distribution restricted to an arbitrary class)

[3] Morphemic alternation of affixes in class 110 is not completely analyzed. Each affix in this class has an alternant with final h instead of final ?.

[4] Classificatory affixes here listed do not make any determinable difference to the root. That they are derivational affixes, however, is shown by the fact that they are generally lost from R in the formula R + S = S.

[104] [5] *V* is used here and in morpheme 321.1 as a morphophonemic symbol for a lengthening of a single vowel to two morae.

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193 211. -kĭ benefactive

221. -ma completive
222. -ʔe habitual

231. -kʷa motion away

241. -yu verbalizer

251.1 -tuʔi future → (in positive statements)
251.2 -waʔi future → (in negative statements)
252. -ʔi past
253. -yU past (?)
254. -nU past (?)

Class 300: 310–330 nominal suffixes in relative orders by decades.

311.1 -tĭ nominalizer, pre-plural → (with S^a except as described for 311.2; and after all verbal inflection except 251.1)
311.2 -ɸ nominalizer, pre-plural → (with S^{pr} 1st and 2nd persons)
311.3 -nĭ nominalizer, pre-plural → (with S^a, and after 251.1; never occurs except with 321 or 322)
312.1 -ʔ subjectivizer → (with S^{pr} 1st and 3rd persons singular)
312.2 -nĬ subjectivizer → (with S^{pr} 2nd singular)
313. -ʔa genitive
314. -hka (meaning undetermined)

321.1 -V plural → (occurs except as defined in alternants below)
321.2 -mĭ plural → (with S^{pr} nĭ 1st person exclusive, in proclitic position, and fluctuates with 321.1 after ta 1st person inclusive and mĭ alternant of 2nd person)
321.3 -nĬ plural → (with S^{pr} 1st and 2nd persons in plural free forms and 1st person exclusive in enclitic position)

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322.1	-ɬ^{w}Ī	dual → (fluctuates freely with 322.2 except as defined in alternants below)
322.2	-h	dual → (occurs in objective forms (plus 331); otherwise fluctuates freely with 322.1 except as in 322.3)
322.3	-hī	dual → (occurs on proclitic S^{pr})
323.	C_1V_1-	non-singular (for alternants and patterns of reduplication see **3.1.1.**).
331.1	-ha	objective → (generally with singular S^{a} ending in 131 or 132; reduction occurs: -ʔ + -ha > -ʔa)
331.2	-hta	objective → (with a group of S^{a} ending in a bilabial consonant + I)
331.3	-i	objective → (with a group of S^{a} ending in -tO and -cO without assimilation and reduction; occurs with S^{a} other than all above, and after 311, 321, or 322, with assimilation and reduction)[6]

2. Stem formation. Comanche stems are derived according to the formulae below. Patterns of stem formation do not coincide with stem classes. In these formulae a root (R) is a morpheme, free or bound, to which

[104]

[194]

[6] Final back vowels become voiced front vowels on the same level. The resulting vowel cluster is reduced by loss of the second member. 'yuhhu *grease* > *'yuhhii > 'yuhhi *grease* (object); 'wihtua *bucket* > *'wihtuei > 'wihtue *bucket* (object). When following 311 and 321 or 322, the assimilation applies to both morphemes. 'sonipɅnΙ *grass* (plural) > *'sonipɅnΙΙ > 'sonipɅnii *grass* (plural object); 'huniyanΙh *songs* (dual) > *'huniyanΙhi > 'huniyanibi *songs* (dual object).

Examples of alternants 331.1 and 331.2: 'wa?oo? *cat* > 'wa?oo?a *cat* (object); 'pihɬɨkΙi *peach* > 'pihɬɨkΙiha *peach* (object); 'tosahwI *silver* > 'tosahwihta *silver* (object); 'tosiitO *hoof* > 'tosiitoi *hoof* (object).

A stem which does not fit the pattern: 'yΙhnΙ *porcupine* > 'yΙhne *porcupine* (object).

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193 derivational affixes may be attached, or with
104 which other roots may be compounded. R_1 is a free root. A stem (S) is a root, with or without derivational affixes, to which inflectional affixes may be attached, or which functions as an uninflected particle.

193 Stems contain only one stress, generally on
194 the first syllable, or none at all in the case of clitic stems. Examples: 'puhihwI *money*, 'to?I *pipe*, 'tīrī?ai *work*, wa'sape *bear*, nī-'nia? *my mother*.

193 Formulae for stem formation cover observed formations, but do not imply that any root may occur in all possible formational combinations.

R_1 = S. 'pui? *eye*, 'wa?oo? *cat*, '?ara? *cross uncle*, 'tīhka *eat*, 'mi?a *go*, 'haa *yes*.

110 + R = S. 'tahpaana *sole of foot* < 117 + -paana *palm*; tahto'koo *big toe* < 117 + -to'koo *first digit*; mahto'koo *thumb* < 112 + -to'koo *first digit*; tah'tua *little toe*; 'co?nika? *hat* < 114 + -nika? *push into*; 'soko-kī ma-'ci?nikatī-nī? *I am sticking it into the ground* < 119 + -nika? *push into*; ma'cihorarī-nī? *I am digging it (with a stick or spade)* < 111 + hora *dig*; ?u-'hu?kᵂĪri-?a?i-nī? *I spilled it with my back* < 116 + kᵂĪri?a *spill*.

120 + R ± 130 = S. 'naʙoopĪ *picture* < 121 + 'poo *draw* + 131; 'narihka *groceries* < 121 + 'tihka *eat*.

120 + (110 + R)[7] = S. 'narohtīkᵂa?i-?inĪ *you hit yourself (with hand)* < 121 + (113 + tīkᵂa *hit*).

R + 130 = S. 'tihka? *table* < 'tihka *eat* + 132; 'piapĪ *big* < 'pia- *big* + 131; 'tihkapĪ *meat*; 'poopĪ *drawing* < 'poo *draw* + 131; 'huupI *tree* < 'huu- *wood, log, tree* + 133; 'paapI *head* < 'paa- *head* + 133; 'tenahpī? *man* < 'tenah- *man* + 134.

R + S = S (in which the S preceding the equation sign may be any stem including the resultant of this formula; however, the maxi-

[7] Immediate constituents are divided in this way because *120 + 110 (without R) never occurs. 110 + R = S above, but S cannot be substituted for 110 + R here because S resulting from other formulae do not occur with 120.

[p. 95-B]

193 mum observed number of roots in any combination is four: 'piarosawoвikni *big white house* < 'pia- *big* + 'tosa- *white* + 'woвi *wooden* + 'kahni *house*). Examples: 'pukuknI *barn* < 'puuku *horse* + 'kahni *house*; '?esiwanah *gray blanket* < '?esi- *gray* + 'wanah *blanket*; 'tīkʷík*itu?i-?urīkʷĭ *they* (dual, distant) *will sit down to eat* < 'tihka *eat* + yīkʷi *sit down* (non-singular); 'tīrī-ehpī?rīī-ca? ma-'вiacahora?I *the children dug out a deep hole* (*with hand*) < 'pia- *big* + 111 + -hora *dig*; 'puica?nika? *eye glasses* < 'pui? *eye* + 111 + -nika? *push into*; 'koвena-вoopĭ *portrait* < 'koовE *face* + 121 + 'poo *draw* + 131; nī-'вia?-ca? 'pianacahki?a?I *my mother scratched herself deeply* (*with something sharp*) < 'pia- *big* + 121 + 111 + -ki?a *scratch*; 'nīmīkʷa?ihpī? *Indian woman* < 'nīmI *Indian* + 'kʷa?ih- *woman* + 134; '?eso?ekaвItĭ *pink* < '?eso *not quite ripe* + '?eka- *red* + 135.

193 128 3. Stem classes. The above stems are divided into distributional classes S^s, S^a, S^p, on the basis of potential occurrence with alternants of 311. Stems as such are not equated with words.

193 3.1. S^s may take alternants 311.1 or 311.2, with the formal sub-classes S^q, S^v, S^a, S^{pr}:

3.1.1. S^q (qualitative stems) take 323. They are inflected for future according to the formula S^q + 241 + 251. '?eвIвI *blue* + 311.1 > '?eвIвItĭ *blue, blue one*; '?eвIвI *blue* + 241 + 251 > '?eвIвIyutu?i-marīī *they will be blue* (-marīī 3rd person plural close).

The initial syllable of stems beginning $C_1V_1C_2$- reduplicates with 323 in two patterns: $C_1V_1C_1V_1C_2$- and $C_1V_1hC_1V_1C_2$-. 'huyunihtĭ *cylindrical* > 'huhuyunihtīkʷĭ *cylindrical ones* (dual); 'tītaatĭ *little one* > 'tihtītaatīkʷĭ *little ones* (dual).

Some S^q show morphophonemic reduction when occurring with 323, with some initial $C_1V_1C_2$- becoming stem-initial -C_1C_2- when occurring with 323 (see fn. 2). 323 +

[p. 96-A]

193 'pohotatĭ *thick, thick one* + 321 > 'pophotatīī *thick ones* (plural).

Some non-S[q] which contain as the initial morpheme a root which generally forms an S[q] may take 323 in the same manner. ʔi-'totsaʙimoroo'nīī-ca' 'koi'nīī *your white cows died* < 'tosaʙimoroo' *white cow*; ʔi-'piʙiarosaʙimoroo'nīī-ca' 'koi'nīī *your big white cows died* < 'piarosaʙimoroo' *big white cow*.

3.1.2. S[v] (verb stems) do not take 323. They are inflected for future tense according to the formula S[v] + 251. 'mi'a *go* + 311.1 > 'mi'arī-tah *we* (dual inclusive); *are going, we are the ones going* (-tah 1st person dual inclusive); 'mi'a *go* + 251 > 'mi'aru'i-tah *we* (dual inclusive) *will go*.

3.1.3. S[e] (phonologically bound enclitic stems) may take 200 and/or 300 (but not 323). These stems are considered clitics in that (1) they are phonologically bound to words[1] being normally unstressed and not uttered in isolation; (2) they occur after any inflection on the stem, although they may themselves be inflected. 'kahninīī-kĭyutu'-inīī *the ones who will be in the houses* < ('kahni *house* + 311) + (-kĭ + 241 + 251 + 311). 'tenanīī-ma'aiyutu'inīī *the ones who will be with the men* < ('tenah- *man* + 311) + (-ma'ai *with* + 241 + 251 + 311). Immediate constituents are divided on the analogy of 'nī-ma'aiyutu'i-'urĭk[v]ĭ *they* (dual) *will be with me*. nī 1st person exclusive (see 3.1.4) does not take 200 inflection.

3.1.4. S[pr] (pronoun stems) may take no other inflection than 300 (but not 323). In clitic form they are unstressed.

Non-demonstrative S[pr] (1st and 2nd persons): nī 1st person exclusive, ta 1st person inclusive, ʔī–mī 2nd person (ʔī is never inflected with 311; mī is always inflected with 311). nī-ʙia' *my mother*, ʔi-'po'oro' *your* (sg.) *pig*, mihī-'sarii' *your* (dual) *dog*.

[1] For the formation and definition of words, see 4.

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193 Demonstrative S^{pr} (3rd person): ma 3rd person close, si and ʔi[9] 3rd person close, so and ʔo 3rd person distant, su and ʔu 3rd person distant or out of sight. 'pae ma-'ʔuhtu *give him* (close) *the water*, 'sitɪ̈-ha ʔu-'ʁuniʔ *did he* (close) *see him* (distant)?

S^{pr} with specialized meanings: pī 3rd person identical with subject, nī 2nd person predual imperative. These have also a specialized distribution. pī appears only in proclitic position as possessor of nouns and verbal nouns. pī-'sariiʔ *his own dog*, pī-'kahni-kɪ̈-ʔuʔ *he is in his own house*. nī always appears in enclitic position inflected with 322. 'kʷaʁi-nīkʷɪ̈ *lie down* (dual)*!*, 'keta-nīkʷɪ̈ 'ʔihkoitikʷɪ̈ *don't go to sleep* (dual)*!*, nī-'ramiʔa-nīkʷɪ 'ʁuuniʔ *look at my brother* (dual)*!* < nī- 1st person exclusive + 'tamiʔ *younger brother* + 331 + -nī 2nd person imperative + 311 + 322, 'puniʔ *see* + 201.

ma, ʔo, ʔu and all non-demonstrative S^{pr} may be proclitic or last order enclitic. Proclitic position indicates possession of a noun or object (with objective inflection in the non-singular) of a verb or verbal noun.[10] nī-'ʁiaʔ-caʔ nī-'ʁuwaitɪ̈ *my mother wants me, my mother is the one wanting me* < nī 1st person exclusive + 'piaʔ *mother* + -caʔ stative particle (S^{p}), nī 1st person exclusive (object) + 'ʁuwai- *want* + 311.

Enclitic position (with 312 in the singular) indicates subject of a noun, a verb, or a verbal noun. ʔī-'pia-ʔuʔ *she* (distant) *is your mother*, mīhī-'tohpaʔi-marīkʷɪ̈ *they* (dual, distant) *hit you* (*dual*) (mī + 311 + 322 + 331; ma + 311 + 322); 'yaketī-ʔinɪ̈ *you are crying*. If any word precedes the verb in the sentence, the pronoun subject is generally enclitic to that word. 'picipɪ̈ha-ʔorīī 'hinitīī *they* (distant) *are drinking the milk, they are the ones drinking the milk*.

Non-demonstrative S^{pr} may be free forms when inflected with 321.3 or 322.1. They

[9] Meaning distinction between ʔ- and s- undetermined.

[10] For the formation and definition of words, see 4.

[p.97-A]

193 carry stress in this form (see 4). 'nīnĭ *we* (plural exclusive), 'mĭkʷĭ *you* (dual).

Demonstrative S^{pr} may be free forms (with stress) when inflected with 311.1 or 314. (ma has never been found inflected with 314.) '?itī *this one*, 'surīī *those* (out of sight), '?ohka *that one* (distant).

Demonstrative and non-demonstrative S^{pr} may cluster with other clitics (S^{pr}, S^{s}, S^{p}) to constitute a free form with one stress. 'sukīrĭ-?u? *it is over there* < su 3rd person distant + -kĭ *in, at* (S^{s}) + 211 + -?u 3rd person distant + 312; 'nī-?u? *it is I*.

3.2. S^{n} (noun stems) may take alternant 311.3.[11] 'peekʷinīī *fish* (plural) < 'peekʷi *fish* + 311.3 + 321; tahto'koonĭkʷĭ *big toes* (dual); 'tīnoopĭnīī *paper* (plural); 'pisarosawonikninīī *big white houses* (plural).

One group of S^{n} does not take 323 in the non-singular. 'pui?nīkʷĭ *eyes* (dual); 'kwasu?unīī *shirts* (plural).

Two groups of S^{n} take 323 in the non-singular: (1) stems which contain as the initial component a root which generally forms an S^{q} (see 3.1); (2) a class of simple stems. 'yuyuupĭnīī 'tenanīī *fat men* < 'yuupĭ *fat*; '?i?ĭrī?nīī *good natured ones* < '?ĭrī? *good natured*; 'mumucipĭnīkʷĭ *sharp ones* (dual) < 'mucipĭ *sharp*.

3.3. S^{p} (particle stems) never take inflection. They are of two types, free and bound, e.g:

Free: 'kee *no*, 'haa *yes*, 'nah *just*.

Bound: -ca? stative particle (generally used in declarative sentences), nī-ʙaci?-ca? ?ĭ-'paʙi?-ʙetĭ *my older sister is the size of your older brother*; -se? narrative particle (gener-

[11] In one loan-translation, '?ohaʙĭtĭ *orange* (a fruit), '?ohaʙĭtĭnĭī *oranges*, both -tĭ and -nĭ (alternants of 311) occur in sequence in the non-singular. Apparently the S^{q} '?ohaʙĭ *orange* (color) and -tĭ with which it generally occurs as a noun, form an S^{n} in this case. S^{q} take 323 in the non-singular while the S^{n} '?ohaʙĭtĭ, now the name of a specific object, does not. In one informant's speech the transformation has been made more complete: '?ohaʙĭtĭ? *orange* (with 123 nominalizer).

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193 ally used in tales), 'surī-kĬ-se' 'wihnu 'rīya-ainU *he then died*; -ha interrogative particle, 'surĬ-ha pin'haa?a 'caa 'kīsuka *does he like sugar?*

4. Word formation. Stems and affixes may be combined into words according to formulae presented below. Words generally contain only one major stress. A second stress may occur late in a long word. 'tĭkkahni-'ku-ma? 'mi?arĬ *he is going to the dining hall.* Words of each class are mutually substitutable in the syntactic positions defined for each class. Inflected words are partially identifiable by the class of the final affix with which they occur. If the final affix is of class 300 the word is a noun (N) or verbal noun (VN). If the final affix is one of class 200 the word is a verb (V). Words which consist of uninflectable S^p are particles (P).

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193 Although clitic S^p and S^{pr} enter into word formation they are not included in formulae for word classes. S^p and proclitic S^{pr} do not change the class of the word in which they are bound and are therefore non-pertinent to the formulae. Enclitic S^{pr}, always subject, are not generally in the same immediate constituent with the word in which they are bound. It is syntactically convenient to define word classes without the limitations which enclitic S^{pr} place on them. 'po?ro?a-ma? 'ruhiBIti 'suwaitī *he wants the black pig* [N (object) -S^{pr} (subject), N (object), VN]; 'kanaBihci?-ma? *he is slender* [N-S^{pr} (subject)].

4.1. Verbs (V) may take subject or object; they may not be subject or object.

$S^v \pm 200 = V$. nī-'rīī-ca? 'narīmī-kU 'kahnimi?a?I *my friend went visiting in town* < S^{pr} + S^s ('rīī *friend*) + S^p = N (subject), S^s ('narīmī *town*) + S^c (-kU *in*) = N (object), S^v ('kahnimi?a *go visiting*) + 252 = V; 'mahitenahpī?-ca? pī-'pake bī-'nahu-ma 'wīsaka?I *the warrior split his arrow with his knife* < S^s ('mahitenahpī? *warrior*) + S^p = N (subject), S^{pr} + S^s ('pake *arrow*) + 331 =

193 N (object), S^{pr} + S^a ('nahu *knife*) + S^e (-ma *with*) = N (object), S^v ('wīsaka *split*) + 252 = V.

S^a + 200 = V. 'sīsīipe?yutu?i-marīī *they will be even (level)* < 323 + S^a ('sīipe? *even*) + 241 + 251 = V, + S^{pr} + 311 + 321 (subject). 'pīprīyutu?i-marīī *they will be heavy* < 323 + S^a ('pīrī *heavy*) + 241 + 251 = V, + S^{pr} + 311 + 321 (subject).

N + S^e + 200 = V (in which N is the resultant of any formula in 4.2). 'tīhtītaatī-ca? 'woвiawonīī-kĭyutu?i *the little ones will be in the boxes* < 323 + S^a ('tītaa *little*) + 311 + S^p = N (subject), [S^a ('woвiawo *box*) + 311 + 321 = N] + S^e (-kĭ *in*) + 241 + 251 = V. 'marīī-kĭyutu?i-ma? *it will be in them* < ['S^{pr} + 311 + 321 = N] + S^e + 241 + 251 = V, + S^{pr} + 312 (subject). ka'huu-ca? 'cena-kuhpayutu?i *the rat will be inside the fox* < S^a (ka'huu *rat*) + S^p = N (subject), S^a ('cena *fox*) + S^e (-kuhpa *inside*) + 241 + 251 = V.

4.2. Nouns (N) may be subject or object; they may take a subject but may not take an object inflected with 331.

N_1 is substitutable in the last formula of this section; N_2 is not. Otherwise both are referred to as N.

S^a ± 300 = N_1. ka'huunīī-ca? 'kīhtaaвicipĭha 'rīhka?I *the rats ate the cheese* < S^a (ka'huu *rat*) + 311 + 321 + S^p = N (subject), S^a ('kīhtaвicipĭ *cheese*) + 331 = N (object), S^v ('tīhka *eat*) + 252 = V. '?arīka-ca? 'wacipĭ *the deer is wandering* < S^a ('?arīka *deer*) + S^p = N (subject), S^a ('wacipĭ *wanderer*) = N.

S^a ± 300 = N_1. pimo'ro?raiвonīī-ca? 'keksuatīī *the cowboys are near* < S^a (pimo-'ro?raiвo *cow-white man*) + 311 + 321 + S^p = N (subject), 323 + S^a ('kesua *near*) + 311 + 321 = N. 'pīhtīti-nī? ma-'?uhtu?I *I gave him the heavy one* < S^a ('pīhtī *heavy*) + 311 + 331 = N (object), + S^{pr} + 312 (subject), S^{pr} + S^v ('?uhtu *give*) + 252 = V. '?orī '?esiвItĭ 'rīhka?-ruhka *that gray one is under the table* < S^{pr} + 311 = N (subject), S^a ('?esiвI *gray*) + 311 = N (subject),

193 [S^a ('tĭhka? *table*) = N] + S^c (-ruhka *under*) = N.

'S^{pr12} + 300 = N_1. 'surĭ-?u? *it* (distant) *is he* (distant) < 'S^{pr} + 311 = N, + S^{pr} + 312 (subject). 'sitĭ-ca? 'rĭtaati 'woBiknIBa?I *he* (close) *has a little wooden house* < 'S^{pr} + 311 + S^p = N (subject), S^a ('tĭtaa *little*) + 311 + 331 = N (object), S^v ('woBiknIBa?i *have a wooden house*) = V. pimo'roo-ca? '?uriĭ 'makUye?I *the cow chased them* (plural) < S^n (pimo'roo *cow*) + S^p = N (subject), S^{pr} + 311 + 321 + 331 = N (object), S^v ('makUye *chase*) + 252 = V.

V + 300 = N_2 (with limitation noted in **4.3**). '?ekaBIyutu?inĭĭ-?uriĭ *they will be red ones* < [S^a ('?ekaBI *red*) + 241 + 251 = V] + 311 + 321 = N, + S^{pr} + 311 + 321 (subject).

N_1 + S^c ± 300 = N_2. '?ok^{w}etĭĭ-kIrĭ-?uriĭ *they are in the river* < [S^v ('?ok^{w}e *flow*) + 311 + 321 = N] + S^c (-kĬ *in*) + 311 = N, + S^{pr} + 311 + 321 (subject). '?e?ekaBItĭĭ-ca? '?e?eBIBIBItĭĭ-'kĭma? *the red ones are beside the blue ones* < 323 + S^a ('?ekaBI *red*) + 321 + S^p = N (subject), [323 + S^a ('?eBIBI *blue*) + 311 + 321 = N] + S^c (-kĭma? *beside*) = N. 'tĭhtĭtaatĭ-ca? 'woBiawo-kUpatĬ *the little ones are in the box* < 323 + S^a ('tĭtaa *little*) + 311 + S^p = N (subject), [S^a ('woBiawo *wooden box*) = N] + S^c (-kUpa *in*) + 311 = N. 'paapasi-nĭ? 'sahuBa-ma?ai-ku 'mahiaru?I *I mixed the potato in with the stew* < S^a ('paapasI *potato*) + 331 = N (object), + S^{pr} + 312 (subject), [S^a ('sahuBa *stew*) = N] + S^c (-ma?ai *with*) + S^c (-kU *in*) = N (object), S^v ('mahia *mix*) + 251 = V. 'tĭpinĭĭ-hoikIt-Ĭca? '?ekaBItĬ *the thing around the stones was red* < [S^a ('tĭpi *stone*) + 311 + 321 = N] + S^c (-hoikI *around*) + 311 + S^p = N (subject), S^a ('?ekaBI *red*) + 311 = N.

[12] Any formation with S^{pr} unstressed is a clitic within a larger word unit (see 4).

[p.99-A]

193 **4.3.** Verbal nouns (VN) may be subject or object; they may take subject and object.

$S^v \pm 200 + 300 = VN$ (note that VN = N formationally, in V + 300 = N above, but distributionally it is distinguished by the fact that it may take an object inflected with 331). 'tĩhoitĩ-ca? '?arĩka?a ?a'ʁehka?I *the hunter shot the deer* < S^v ('tĩhoi *hunt*) + 311 + S^p = VN (subject), S^a ('?arĩka *deer*) + 331 = N (object), S^v (?a'ʁehka *shoot*) + 252 = V. 'kohtoorĩ-?urĩh *they* (dual) *are building the fire* < S^v ('kohtoo *build a fire*) + 311 = VN, + S^{pr} + 311 + 322 (subject). 'surĩ pĩ-'tĩetuka?a 'muruka?etĨ 'haʁĩ?eeyU *he, blowing out his little lamp, was asleep* < 'S^{pr} + 311 = N (subject), S^{pr} + S^a ('tĩetuka? *little lamp*) + 331 = N (object), S^v ('muruka *blow out*) + 222 + 311 = VN (subject), S^v ('haʁi *sleep*) + 222 + 253 = V. hu'cu?anĩ? 'yaketi 'naka?I *I heard the bird singing* < S^a (hu'cu? *bird*) + 331 = N (object), + S^{pr} + 312 (subject), S^v ('yake *sing*) + 311 + 331 = VN (object), S^v ('naka *hear*) + 252 = V. ka'huu-ca? 'hanʁihta 'kuu?etĩ 'rĩyai *the rat that used to store away the corn is dead* < S^a (ka'huu *rat*) + S^p = N (subject), S^a ('hanʁI *corn*) + 331 = N (object), S^v ('kuu *store away*) + 222 + 311 = VN (subject), S^v ('tĩyai *is dead*) = V. 'tĩhka?eeru?inĩĩ *ones who will be eating continually* < S^v ('tĩhka *eat*) + 222 + 251 + 311 + 321 = VN.

4.4. Particles (P) may not be subjects or objects, nor may they take subjects or objects. Only those particles which carry their own stress may stand as words.

S^p = P. 'haa 'ciharĩyaihumi?arĩ-nĩ? *yes, I am hungry* < S^p ('haa *yes*) = P, S^v ('ciharĩyaihumi?a *go hungry*) + 311 = VN, + S^{pr} + 312 (subject). 'ke-nĩ? 'wananapĨha 'suwaitĨ *I do not want the sock* < S^p ('kee *no*) = P, + S^{pr} + 312 (subject), S^a ('wananapĨ *sock*) + 331 = N (object), S^v ('suwai *want*) + 311 = VN.

[p. 99-B]

601 195 namí·ʔ *younger sister* [námI address form; **námiʔ** reference form].

takáʔ *sibling* [tákA address form; **tákaʔ** reference form].

tamíʔ *younger brother* [támI address form; tamiʔ reference form].

paví·ʔ *older brother* [pávI address form; páviʔ reference form].

pahá·ʔ *father's sister* [páhA address form; páhaʔ reference form].

kakú·ʔ *grandmother* [*mother's mother* is the adult meaning; kákU address form; kákuʔ reference form].

tokó·ʔ, totó·ʔ *grandfather*, sometimes *father* (this form used by a younger child) [*mother's father* is the adult meaning; tókO address form; tókoʔ reference form].

The following terms may also be used if the child is old enough to make the distinction: kĭnú·ʔ *father's father* [kĭ̂nU address form; kĭ̂nuʔ reference form]; hucí·ʔ *father's mother* [húcI address form; húciʔ reference form].

These kinship terms, other than those used for *father*, *mother*, and *grandparents*, probably appear relatively later in the child's vocabulary. Just how far they are extended to include those relatives normally subsumed under them in adult usage is not certain, but they may be taken to apply primarily to those persons designated above or their surrogates. It is interesting to note that the maternal grandparental terms are those first [591] used for all grandparents. This suggests matrilocal residence, or at least more intimate contact with the mother's parents than with the father's.

195 In addition to the above list of formal baby words several characteristics of Comanche children's speech may be mentioned. 195 There is a tendency for children to add the diminutive-endearing suffix, -cI and the related -sI to words; e.g., haicí·ʔ for haíc *friend*. Reduplication,[3] as might be inferred

[113] [3] Kroeber mentions this tendency to reduplicate in the speech of a Zuni child of 23 months whom he observed. A. L. Kroeber, The Speech of a Zuni Child, AA 18.529-34; the only published account of the speech development of a primitive child.

[p. 12-B]

from the above list, is another feature: tĭtĭ is said by little girls for tĭ·i, *girl friend;* pipiá for piá *mother*, etc. Although reduplication is present in Comanche as a grammatical process, it performs no ostensible grammatical function in the child's speech. Various phonemic substitutions are made; p for kw as pîhI for kwîhĭ *wife;* pánA for kwánA *odor, smell;* also i for ĭ as tiás for tĭas, etc. One person carries the personal name, pitá·si? *one who always defecates*, a "baby name", where a p is substituted for the kw in kwítA *defecate!*, and the suffix -sI is also added. These substitutions are not regular, but are commonly made by children learning to speak. Somewhat more regular is the substitution of t for r (see examples in the word list).

Several facts become apparent upon study of the above list of baby words. First, it must be recognized that these function not as single, simple words, but as whole sentences with many different, albeit related, possible meanings (exclamatory, imperative, declarative, interrogative) which are elucidated by gestures, intonations, and the context of the situation. They are really sentence-words. Phonetically the baby words are simple: there are no preaspirated consonants; the sonant plus h does not appear; whispered vowels and the defective phonemes, r and v, are rare and their appearance is probably late in the speech development of the child. The x phoneme and the long m are unique to the baby vocabulary.

Reduplication is evident and appears to be especially common in those words generic to the baby language and basic to it. The baby word phonetic pattern of two syllables with the second vowel accented, long, and usually ending in a glottal stop occurs in most of the examples. Words derived from the adult vocabulary are put into this pattern, as may be seen from the relationship terms. Presumably it is in this phonetic form that words are first presented to the child. This seems consistent with our practice of carefully enunciating words when teaching them to a child.

194 121 pretation: "Vowels are normally voiced. It is still questionable whether there are languages in which parallel to the consonantal opposition voiced vs. voiceless, there actually is a similar distinctive opposition of voiced and murmured vowels, as reported about a few American Indian languages, e.g. Comanche. Either the vocal murmur is not a distinctive feature and functions merely as a border mark, or it may be a concomitant of the tense-lax opposition."[3]

This article, therefore, is an attempt to supply more extensive data and argumentation on this point than previous authors have given, since to me it appears conclusive that, in Comanche, voiceless (or 'whispered') vowels in syllabic position are phonemic. The interpretation of phonetic voiceless vocoids in pre- and/or post-syllabic position will also be discussed.

194 1. The phonemic contrast of voiced and voiceless vocoids in syllabic position can be seen in their occurrence in identical environment. Here, surely, no conditioning factor is present. Note, for /e/ versus /E/, ʔu'kuʔ-okʷekʷaiʔuʔ *she went to render it*, (e.g. *lard*), ʔu'kuʔokʷEkʷaiʔuʔ *she rendered it and went on*. In these two examples, the stress, length, pitch, rhythm, and phonological junctures are the same. The grammatical structure is also comparable: each 194 193 196 begins with the morpheme ʔu- *object, 3d per. sing.*, followed by the morpheme ku- *heat as an instrument*; following the stem in each is the morpheme -kʷa *movement away*, the morpheme -ɨ *past tense*, and the morpheme -ʔuʔ *subject, 3d per. sing.* The stem ʔokʷe means *a flowing or liquification with purpose directed toward the motion indicated*

[3] Idem. 26.

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194 196 193 *in the following morpheme*, whereas the stem ʔokʷE is a complex stem composed of ʔokʷe modified by the addition of the morpheme comprised phonetically of stem final unvoicing, and which has the semantic implication of *stem meaning resulting in action indicated by the following morpheme.*

194 Brought about by the occurrence of this same stem-final-unvoicing morpheme, and preceding -ki *movement toward*, similar contrasts between voiced and voiceless vowels can be observed, e.g. 'norɪ̈bakiki'u' *he came to pack* versus 'norɪ̈bakIki'u' *he packed and came on.* Again, no phonological or morphological conditioning factors are present. Similar contrasts can be seen in 'mayakeki'u' *he came to play* (e.g. *the piano*), 'mayakEki'u' *he played and came on*; ʔu'hanikɪ̈ki'u' *he came to fix it for him* versus ʔu'hanikɪ̈ki'u' *he fixed it for him and came on*; ʔu'ni'aciki'u' *he came to advise him* compared with ʔu'ni'acIki'u' *he advised him and came on.* Another contrast preceding -kʷa can be observed in 'namaka'mukikʷai'u' *he went to dress himself* versus 'namaka'mukIkʷai'u' *he dressed himself and went on.* -ki and -kʷa are interchangeable in any of the illustrations listed above.

2. Utilization of analogous data should prove profitable, contrasting /u/ /U/, /o/ /O/, /e/ /E/. Thus ʔu'ʔuhtuki'u' *he came to give to her* contrasts with ʔu'ʔutUki'u' *he gave to her and came on*; 'nohkoki'u' *she came to bake biscuits* with 'nokOki'u' *she baked biscuits and came on*; and ʔu'manahkeki'u' *he came to measure it* with ʔu'manakEki'u' *he measured it and came on.* These same stems occur with similar resultant contrasts preceding -kʷa.

Nothing in these word pairs is of such a nature or in such a position as to make a non-phonemic conditioning variation from voiced to voiceless a characteristic of the vowel. The theoretical possibility of /U/ /O/ being conditioned by voiced equivalents occurring in contiguous syllables preceding these voiceless vowels is partially eliminated